

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Phan

Application No.: 10/771811

Filed: 2/4/2004

Title: Highly Available Dual Serial Bus Architecture

Attorney Docket No.:

Group Art Unit: 2111

Examiner: Phan

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

RESPONSE UNDER 37 CFR 1.111

Dear Sir:

In response to the Office Action of February 13, 2006, please amend this application as follows:

In the Specification:

Please replace the paragraph spanning page 8 line 13 – page 9 line 6 with the following:

Furthermore, the power supplies 32a,b are capable of exchanging status information between each other via status lines 40. For example, referring to Figure 4, each power supply (one is shown, 32a) includes two microcontrollers 41' and 42. The microcontroller 41 includes various registers for controlling the power supply and reporting power supply status. These registers are accessible via the I2C bus [[32a]] 38a, herein expanded to show its clock signal SCL and data signal SDA, and an attendant Reset signal I2C Reset. The second microcontroller 42 is also coupled to the I2C bus 38a. The microcontroller 42 is further coupled to a blower assembly 44 that contains a pair of blowers 46. Blower status, for example fault and speed status, is shared between the power supplies 32a, b. More particularly, the blower assembly 44 in power supply 32a provides blower sensor outputs 48 to the power supply 32b. The blower sensor outputs 48 provide an indication as to whether each blower 46 is properly operating. The microcontroller 42 provides a blower speed output 50 to the power supply 32b. Blower speeds are adjusted based upon temperature, as monitored by the microcontroller 42, and based upon how many blowers are operating. Furthermore, blower sensor inputs 52 and blower speed input 54 are received by the microcontroller 42 and the blower assembly 44 from the other power supply 32b.

In the claims:

1. (currently amended) Apparatus in an enclosure comprising :
a plurality of serial bus controllers;
a serial bus coupled to the plurality of serial bus controllers, the serial bus for collecting environmental and status information associated one or more devices included in the enclosure;
an arbitration mechanism for controlling access to the serial bus by the plurality of serial bus controllers, the arbitration mechanism comprising redundant control lines, wherein each of the plurality of serial bus controllers is assigned a different number n of a period td for driving the control signals after a delay t1 when seeking to take control of the serial bus.
2. (original) The apparatus of claim 1 wherein the arbitration mechanism further comprises:
a circuit in each of the serial bus controllers for monitoring the control lines to ascertain whether the serial bus is in use.
3. (currently amended) The apparatus of claim 2 wherein the arbitration mechanism further comprises:
a circuit in each of the serial bus controllers for driving the control lines for a predetermined period of time equal to $t1 + n * td$ if the serial bus is not in use, and for then releasing the control lines and monitoring the control lines to ascertain whether the control lines are being driven by another controller.
4. (currently amended) A method of managing collection of status information in an enclosure comprising the steps of:

providing a serial bus coupled to a plurality of serial bus controllers, the serial bus for propagating environmental and status information between one or more devices in the enclosure, wherein each of the serial bus controllers is coupled to the serial bus by one of a plurality of redundant control lines;

arbitrating for access to the serial bus by the plurality of serial bus controllers by allocating a different number n of a period td to each one of the serial bus controllers of the plurality, wherein each of the serial bus controllers drives their associated control line by their for a time period equal to $n * td$ to gain control of the serial bus. ~~driving redundant control lines.~~

5. (original) The method of claim 4 wherein the step of arbitrating further comprises:
monitoring the control lines to ascertain whether the serial bus is in use.
6. (original) The method of claim 5 wherein the step of arbitrating further comprises:
driving the control lines for a predetermined period of time if the serial bus is not in use,
and then releasing the control lines and monitoring the control lines to ascertain whether the control lines are being driven by another controller.
7. (original) The method of claim 6 wherein the step of arbitrating further comprises:
taking control of the serial bus if it is ascertained that the control lines are not being driven by another controller.

REMARKS

Reconsideration and further examination are respectfully requested.

Rejections under 35 U.S.C. §102

Claims 1-7 were rejected under 35 U.S.C. §102(e) as being anticipated by White (U.S. Patent No. 6,260,079).

In order to support a rejection under 35 U.S.C. §102(e), every limitation in the claims must be shown or suggested by the references. Applicants have amended the claims to more distinctly highlight several patentable distinctions between White and the present invention, and therefore respectfully submit that White fails to meet this burden.

For example, claim 1, as amended, now recites "...a plurality of serial bus controllers ... a serial bus coupled to the plurality of serial bus controllers, *the serial bus for collecting environmental and status information associated one or more devices included in the enclosure ... an arbitration mechanism for controlling access to the serial bus by the plurality of serial bus controllers, the arbitration mechanism comprising redundant control lines, wherein each of the plurality of serial bus controllers is assigned a different number n of a period td for driving the control signals after a delay t1 when seeking to take control of the serial bus...*"

In contrast, although White describes at column 23, lines 12-15 that an I2C bus is included in their architecture for power monitoring and temperature sensing, no such structure as that of the claimed invention is found in White. In addition, Applicants can find no description or suggestion of an arbitration mechanism of White which includes 'driving the control signals after a delay t1...' as now recited in the claims. For at least these reasons, claim 1 is patentably distinct over White, and it is respectfully requested that the reference be withdrawn. Dependent claims 2-3 serve to further limit claim 1 and are allowable for at least the same reason as claim 1.

Claim 4 as amended, now recites "...providing a serial bus coupled to a plurality of serial bus controllers, the serial bus for propagating environmental and status information between one or more devices in the enclosure, wherein each of the serial bus controllers is coupled to the serial bus by one of a plurality of redundant control lines ... arbitrating for access to the serial bus by the plurality of serial bus controllers by allocating a different number n of a period td to each one of the serial bus controllers of the plurality, wherein each of the serial bus controllers drives their associated control line by their for a time period equal to $n*td$ to gain control of the serial bus ..."

Accordingly, for at least the reason that White fails to describe or suggest several limitations of claim 4, it is requested that the rejection be withdrawn. Claims 5-7 serve to further limit claim 4 and are allowable for at least the same reasons as claim 4.

Conclusion:

Applicants have made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Applicants' Attorney at the number listed below so that such issues may be resolved as expeditiously as possible.

For these reasons, and in view of the above amendments, this application is now considered to be in condition for allowance and such action is earnestly solicited.

Respectfully Submitted,

May 15, 2006
Date

/Lindsay G. McGuinness/
Lindsay G. McGuinness, Reg. No. 38,549
Attorney/Agent for Applicant(s)
McGuinness & Manaras LLP
125 Nagog Park
Acton, MA 01720
(978) 264-6664

Docket No. 130-022
Dd: 5/13/2006